
CONNECTORIZED MULTIPLEX SHELF (MS/WC7, MS/WC5, MS/C7 AND MS/C6), 628001, 628005, 628011 AND 628015 (FOR 23-INCH BAYS) OPTION SELECTION, INSTALLATION AND PRETEST

This Section provides instructions to select options on, install, and test D448 multiplex shelves, 628001, 628005, 628011, and 628015.

This Section has been reissued to add information on - 48V talk battery connections and the Group -003 multiplex shelf for use with dataport channel units.

Option selection consists of selecting different strapping options for each digroup on the rear of the backplane. Installation of the multiplex shelf consists of physically mounting the shelf in a relay rack and making external wiring connections to the shelf backplane. Various channel unit voice frequency (VF) and signaling leads are connectorized on the different versions of the shelf. Testing consists of checking voltages on input battery, talk battery, 20-Hz ringing, and - 48-alarm battery source (ABS) for the proper connection and voltage levels.

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CHART 1 INSPECTION

APPARATUS:

None

STEP

PROCEDURE

-
- | | |
|---|--|
| 1 | Remove multiplex shelf from shipping carton. |
| 2 | Perform an inventory to verify that all equipment listed on the packing list is present. |
| 3 | Inspect shelf for damage due to shipping. Report any damage to carrier immediately. |
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CHART 2

MOUNTING

APPARATUS:

Standard hand tools as required (see Section ITTR-18-400)

STEP	PROCEDURE
1	Ensure rear cover is in place to provide protection to wire-wrap pins during installation.
2	Position shelf at desired height in relay rack.
3	Secure shelf to relay rack by installing two 12-24 screws, flat washers, and lock washers at each of the four mounting flanges (one flange at each corner). The screws and washers are supplied in a cloth bag marked 600004-205-003.

CHART 3

OPTION SELECTION

APPARATUS:

Standard hand tools as required (see Section ITTR-18-400)

1—26AWG bit (Gardner-Denver 505279)

1—Sleeve (Gardner-Denver 507100)

1—Unwrap tool (Gardner-Denver 509489)

STEP	PROCEDURE
	Note: The multiplex shelf is equipped with strapping options for various functions. The common equipment options are located on the left side of the backplane (Fig. 1). The timing options are located in the middle of the backplane above the equalizers (Fig. 1). The channel unit options are located on each channel unit connector.
1	Select common equipment options on the backplane in accordance with Table A.
2	Install TIMING OPTIONS on the backplane in accordance with Table B. These options are only functional when office interface unit/loop timing (OIU/LT), 628090, is used in the terminal.
	Note: If type II (loop) signaling is required for any channel unit, perform Steps 3 and 4 on the associated 60-pin connector for each channel unit as required. If this is not required, proceed to Chart 4.

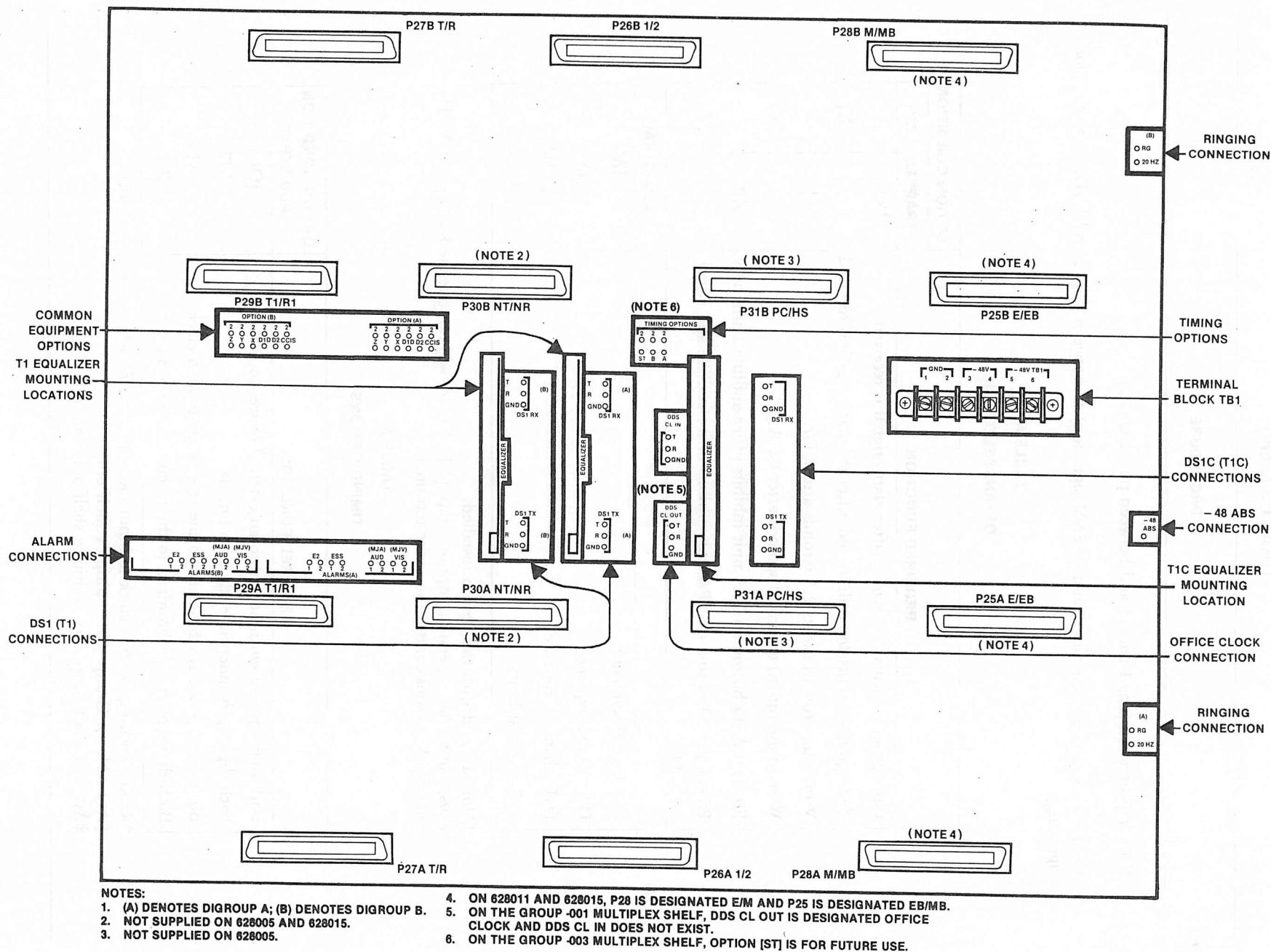


Fig. 1—D448 Backplane Layout

CHART 3 (Cont)

STEP

PROCEDURE

- 3 Cut strap between pins 1 and 11 and between pins 2 and 11.
- 4 Connect a strap between pins 1 and 8 (E&M signaling) or between pins 2 and 9 (DPO, SDPO, loop signaling).

TABLE A
OPTION SELECTION

REQUIRED FUNCTION	OPTION CONDITION	
	STRAPPED	CUT
CGA ground occurs 2.5 seconds after alarm signal is received.	[X]*	—
CGA ground occurs 450 milliseconds after the alarm signal is received.	—	[X]
Wink pulse (open) occurs 2.5 seconds after CGA.	[Y]*	—
Wink pulse (open) occurs 10 seconds after CGA.	—	[Y]
Pressing ACO button on TPA unit inhibits office audible alarm only.	[Z]*	—
Pressing ACO button on TPA unit inhibits office audible and visual alarms.	—	[Z]
	ADD STRAP	
D3 channel sequence	NA*	
D2 channel sequence	[D2]	
D1D channel sequence	[D1D]	
CCIS compatibility	[CCIS]	

*Unit shipped with this option installed.

Note: In Mode 1 operation, option straps [X], [Y], [Z] will not operate for Digroup B. The Digroup A options control the entire terminal.

TABLE B
TIMING OPTIONS

REQUIRED FUNCTION	OPTION CONDITION ADD STRAP
Both digroups are synchronized to an external office clock*†	[OC]
Each digroup is independently loop timed‡	[ST]
Both digroups are synchronized to the receive Digroup A clock	[A]
Both digroups are synchronized to the receive Digroup B clock	[B]

*Requires wiring external clock to input located on shelf backplane (office clock).

†Available on Group -001 multiplex shelf only.

‡Available on Group -003 multiplex shelf only (future).

CHART 4
ELECTRICAL INSTALLATION

APPARATUS:

Standard hand tools as required (see Section ITTR-18-400)

- 1—Soldering iron and solder
- 1—26AWG bit (Gardner-Denver 505279 or equivalent)
- 1—24AWG bit (Gardner-Denver 505415 or equivalent)
- 1—22AWG bit (Gardner-Denver 504939 or equivalent)
- 1—26AWG sleeve (Gardner-Denver 507100 or equivalent)
- 1—24AWG sleeve (Gardner-Denver 502129 or equivalent)
- 1—22AWG sleeve (Gardner-Denver 507939 or equivalent)
- 1—Unwrap tool (Gardner-Denver 509489 or equivalent)

STEP

PROCEDURE

Note 1: Refer to Fig. 1 during this procedure.

Note 2: If the multiplex shelf is being used with fuse, alarm and distribution panel (FADP), 628490, refer to Section ITTR-18-490 for information on FADP wiring.

— 48V BATTERY WIRING CONNECTION

- 1 At the power board or FADP, remove the fuse supplying — 48V battery to the multiplex shelf.
 - 2 Remove multiplex shelf rear cover.
 - 3 On right side of relay rack (rear view), dress 14AWG stranded — 48V power cable between power source and multiplex shelf (TB1-3). Cut to length.
 - 4 Strip — 48V power cable insulation approximately 1/4 inch on each end, and attach 14AWG spade terminals.
 - 5 Connect one end of — 48V power cable to multiplex shelf (TB1-3). Connect other end to power source.
 - 6 Measure cable run distance between relay rack ground bus and multiplex shelf GND terminal (TB1-1). Cut to length 14AWG insulated, stranded ground cable.
 - 7 Strip one end of ground cable insulator 1 inch, wrap to right side of relay rack (rear view), ground bus, and solder. Strip other end of ground cable insulator 1/4 inch, attach 14AWG spade lug, and connect to multiplex shelf GND terminal (TB1-1).
-

CHART 4 (Cont)

STEP

PROCEDURE

– 48V TALK BATTERY CONNECTIONS

Note 1: If D448 power converter unit (PCU) (internal) talk battery is to be used, install a 14AWG stranded wire strap between TB1-4 and TB1-5.

Note 2: If separate (external) talk battery is to be used, perform Steps 8 through 10.

- 8 On right side of relay rack (rear view), dress 14AWG stranded – 48V talk battery cable between power source and multiplex shelf (TB1-5). Cut to length.
- 9 Strip – 48V talk battery cable insulator approximately 1/4 inch on each end and attach 14AWG spade terminals.
- 10 Connect one end of – 48V talk battery cable to multiplex shelf (TB1-5). Connect other end to power source.

– 48V ABS CONNECTION

Note: Connecting – 48 ABS to the shelf is optional.

- 11 Cut 22AWG insulated, solid wire to required length between – 48 ABS supply connection point and the – 48 ABS pin on the shelf.
- 12 Dress wire along right side of rack (rear view).
- 13 Connect one end of the wire to the multiplex shelf and the other end to power source.

RINGING VOLTAGE CONNECTION

Note: Perform Steps 14 through 16 when any channel unit to be used requires 20-Hz negative superimposed ringing voltage.

- 14 At the ringing voltage source, remove the fuse supplying ringing voltage to the shelf.

DANGER: Verify that the ringing voltage is removed from the connection point.

- 15 Cut 24AWG solid twisted shielded pair cable (ITT Part No. 600015-100-241 or equivalent) to the required length to connect ringing voltage to the shelf.
- 16 Dress cable along right side of rack (rear view).
- 17 Connect one end of cable to the multiplex shelf and the other end to ringing supply.

T1 HF WIRING CONNECTION

Note: Make T1 connections only if Mode 3 operation is being installed at this time. If Mode 1 or 2 is being installed, proceed directly to T1C HF wiring (Step 22).

CHART 4 (Cont)

STEP

PROCEDURE

- 18 Cut ABAM-type cable or 24AWG solid twisted shielded pair cable (ITT Part No. 600015-100-241 or equivalent) to the required length to connect shelf to FADP, line termination shelf, or DSX cross-connect.
- 19 Dress cable along left side of rack (rear view).
- 20 Make connections as shown in Table C. The connection points are wire-wrap pins and are located near connectors J7C and J8C.

TABLE C

T1 HF WIRING CONNECTIONS

DIGROUP A	DIGROUP B
TRANSMIT PAIR: Tip — DS1 TX(A) — T Ring — DS1 TX(A) — R Shield — GND at one end	Tip — DS1 TX(B) — T Ring — DS1 TX(B) — R Shield — GND at one end
RECEIVE PAIR: Tip — DS1 RX(A) — T Ring — DS1 RX(A) — R Shield — GND at one end	Tip — DS1 RX(B) — T Ring — DS1 RX(B) — R Shield — GND at one end

- 21 Connect transmit and receive cables, observing tip and ring integrity, to HF connection point.

T1C HF WIRING CONNECTIONS (FIG. 1)

Note: T1C HF pairs are required for Mode 1 and 2 operations only. Installation of this cable when Mode 3 operation is being used is recommended if other modes are present in the office, future plans call for change out to another mode, or T1C tie points exist.

- 22 Cut ABAM-type cable or 24AWG solid twisted shielded pair cable to the required length to connect the shelf to the FADP, line termination shelf, or DSX1C cross-connect.
- 23 Dress cable along right side of rack (rear view).
- 24 Connect the transmit and receive cables to backplane pins, as shown in Table D. The connection points are wire-wrap pins and are located near connectors J3C and J4C.

TABLE D

T1C HF WIRING CONNECTIONS

T1C TRANSMIT PAIR	T1C RECEIVE PAIR
Tip — DS1C TX — T Ring — DS1C TX — R Shield — GND at one end	Tip — DS1C RX — T Ring — DS1C RX — R Shield — GND at one end

CHART 4 (Cont)

STEP

PROCEDURE

ALARM CONNECTIONS

Note: Alarm connections (E2, ESS, AUD, and VIS) are located on the left of the backplane near connectors J9C through J15C.

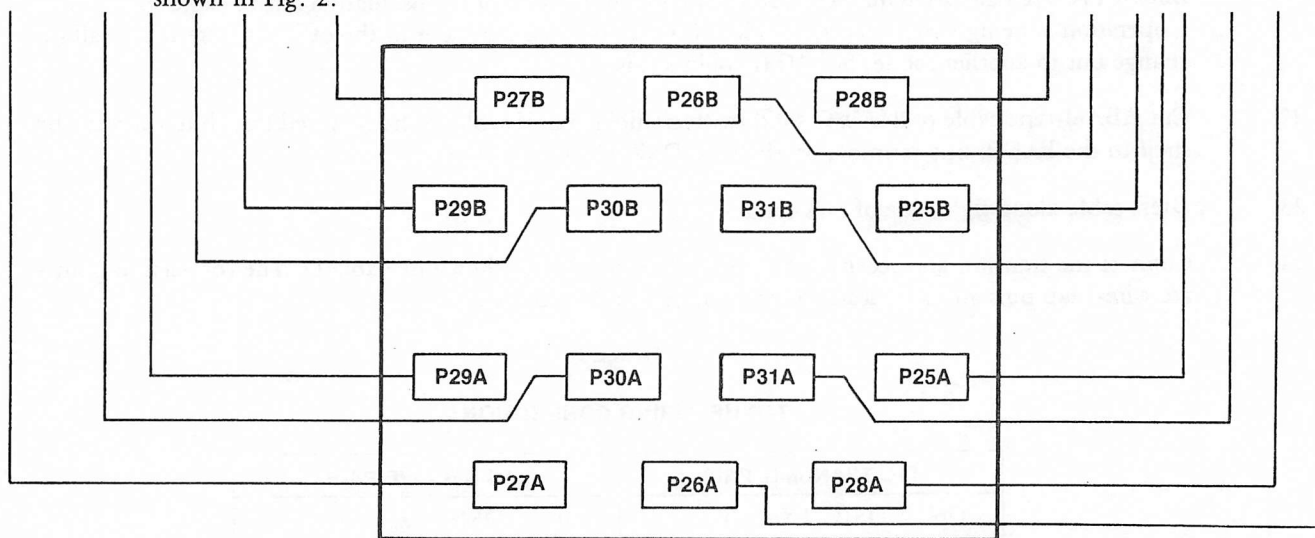
- 25 Cut 24AWG wire to required length to connect shelf to FADP or office alarm system.
- 26 Dress wires along left side of rack (rear view).
- 27 Wire-wrap alarm connections to backplane pins.

Note: For each alarm (E2, ESS, AUD, VIS), wire pin 2 to activating signal (ground) and pin 1 to office alarm.

- 28 Connect alarm loops to office alarm systems or FADP, Digroup A and B (E2, ESS, AUD, and VIS).

CONNECTOR WIRING PROCEDURE

- 29 Measure and record the distance from the office connection points to each VF connector on the multiplex shelf.
- 30 Cut 24AWG switchboard-type cable to each length recorded in Step 29.
- 31 Wire an Amphenol 157-82500-3, Cinch 57-84500-5, or equivalent, connector to one end of each of the cables cut in Step 30. See Tables E or F as required for wiring information.
- 32 Mate each of the J connectors to the corresponding P connectors on the multiplex shelf. Cable routing is shown in Fig. 2.



MULTIPLEX SHELF (REAR VIEW)
Fig. 2—Cable Routing

A1588-1

TABLE E

628001 AND 628005 MULTIPLEX SHELF CONNECTOR WIRING

CHAN #	P25			P26			P27			P28			P29			P30*			P31*		
	MDF	P25 J25 PIN #	CU PIN #	MDF	P26 J26 PIN #	CU PIN #	MDF	P27 J27 PIN #	CU PIN #	MDF	P28 J28 PIN #	CU PIN #	MDF	P29 J29 PIN #	CU PIN #	MDF	P30 J30 PIN #	CU PIN #	MDF	P31 J31 PIN #	CU PIN #
1	E	26	31	1/S	26	32	T	26	3	M/ATB	26	35	T1/A	26	33	NT/TSX	26	5	PC/OS	26	7
	EB	1	8	2	1	9	R	1	4	MB	1	36	R1/B	1	34	NR/RSX	1	6	HS	1	37
2	E	27	31	1/S	27	32	T	27	3	M/ATB	27	35	T1/A	27	33	NT/TSX	27	5	PC/OS	27	7
	EB	2	8	2	2	9	R	2	4	MB	2	36	R1/B	2	34	NR/RSX	2	6	HS	2	37
3	E	28	31	1/S	28	32	T	28	3	M/ATB	28	35	T1/A	28	33	NT/TSX	28	5	PC/OS	28	7
	EB	3	8	2	3	9	R	3	4	MB	3	36	R1/B	3	34	NR/RSX	3	6	HS	3	37
4	E	29	31	1/S	29	32	T	29	3	M/ATB	29	35	T1/A	29	33	NT/TSX	29	5	PC/OS	29	7
	EB	4	8	2	4	9	R	4	4	MB	4	36	R1/B	4	34	NR/RSX	4	6	HS	4	37
5	E	30	31	1/S	30	32	T	30	3	M/ATB	30	35	T1/A	30	33	NT/TSX	30	5	PC/OS	30	7
	EB	5	8	2	5	9	R	5	4	MB	5	36	R1/B	5	34	NR/RSX	5	6	HS	5	37
6	E	31	31	1/S	31	32	T	31	3	M/ATB	31	35	T1/A	31	33	NT/TSX	31	5	PC/OS	31	7
	EB	6	8	2	6	9	R	6	4	MB	6	36	R1/B	6	34	NR/RSX	6	6	HS	6	37
7	E	32	31	1/S	32	32	T	32	3	M/ATB	32	35	T1/A	32	33	NT/TSX	32	5	PC/OS	32	7
	EB	7	8	2	7	9	R	7	4	MB	7	36	R1/B	7	34	NR/RSX	7	6	HS	7	37
8	E	33	31	1/S	33	32	T	33	3	M/ATB	33	35	T1/A	33	33	NT/TSX	33	5	PC/OS	33	7
	EB	8	8	2	8	9	R	8	4	MB	8	36	R1/B	8	34	NR/RSX	8	6	HS	8	37
9	E	34	31	1/S	34	32	T	34	3	M/ATB	34	35	T1/A	34	33	NT/TSX	34	5	PC/OS	34	7
	EB	9	8	2	9	9	R	9	4	MB	9	36	R1/B	9	34	NR/RSX	9	6	HS	9	37
10	E	35	31	1/S	35	32	T	35	3	M/ATB	35	35	T1/A	35	33	NT/TSX	35	5	PC/OS	35	7
	EB	10	8	2	10	9	R	10	4	MB	10	36	R1/B	10	34	NR/RSX	10	6	HS	10	37
11	E	36	31	1/S	36	32	T	36	3	M/ATB	36	35	T1/A	36	33	NT/TSX	36	5	PC/OS	36	7
	EB	11	8	2	11	9	R	11	4	MB	11	36	R1/B	11	34	NR/RSX	11	6	HS	11	37
12	E	37	31	1/S	37	32	T	37	3	M/ATB	37	35	T1/A	37	33	NT/TSX	37	5	PC/OS	37	7
	EB	12	8	2	12	9	R	12	4	MB	12	36	R1/B	12	34	NR/RSX	12	6	HS	12	37
13	E	38	31	1/S	38	32	T	38	3	M/ATB	38	35	T1/A	38	33	NT/TSX	38	5	PC/OS	38	7
	EB	13	8	2	13	9	R	13	4	MB	13	36	R1/B	13	34	NR/RSX	13	6	HS	13	37
14	E	39	31	1/S	39	32	T	39	3	M/ATB	39	35	T1/A	39	33	NT/TSX	39	5	PC/OS	39	7
	EB	14	8	2	14	9	R	14	4	MB	14	36	R1/B	14	34	NR/RSX	14	6	HS	14	37
15	E	40	31	1/S	40	32	T	40	3	M/ATB	40	35	T1/A	40	33	NT/TSX	40	5	PC/OS	40	7
	EB	15	8	2	15	9	R	15	4	MB	15	36	R1/B	15	34	NR/RSX	15	6	HS	15	37
16	E	41	31	1/S	41	32	T	41	3	M/ATB	41	35	T1/A	41	33	NT/TSX	41	5	PC/OS	41	7
	EB	16	8	2	16	9	R	16	4	MB	16	36	R1/B	16	34	NR/RSX	16	6	HS	16	37
17	E	42	31	1/S	42	32	T	42	3	M/ATB	42	35	T1/A	42	33	NT/TSX	42	5	PC/OS	42	7
	EB	17	8	2	17	9	R	17	4	MB	17	36	R1/B	17	34	NR/RSX	17	6	HS	17	37
18	E	43	31	1/S	43	32	T	43	3	M/ATB	43	35	T1/A	43	33	NT/TSX	43	5	PC/OS	43	7
	EB	18	8	2	18	9	R	18	4	MB	18	36	R1/B	18	34	NR/RSX	18	6	HS	18	37
19	E	44	31	1/S	44	32	T	44	3	M/ATB	44	35	T1/A	44	33	NT/TSX	44	5	PC/OS	44	7
	EB	19	8	2	19	9	R	19	4	MB	19	36	R1/B	19	34	NR/RSX	19	6	HS	19	37
20	E	45	31	1/S	45	32	T	45	3	M/ATB	45	35	T1/A	45	33	NT/TSX	45	5	PC/OS	45	7
	EB	20	8	2	20	9	R	20	4	MB	20	36	R1/B	20	34	NR/RSX	20	6	HS	20	37
21	E	46	31	1/S	46	32	T	46	3	M/ATB	46	35	T1/A	46	33	NT/TSX	46	5	PC/OS	46	7
	EB	21	8	2	21	9	R	21	4	MB	21	36	R1/B	21	34	NR/RSX	21	6	HS	21	37
22	E	47	31	1/S	47	32	T	47	3	M/ATB	47	35	T1/A	47	33	NT/TSX	47	5	PC/OS	47	7
	EB	22	8	2	22	9	R	22	4	MB	22	36	R1/B	22	34	NR/RSX	22	6	HS	22	37
23	E	48	31	1/S	48	32	T	48	3	M/ATB	48	35	T1/A	48	33	NT/TSX	48	5	PC/OS	48	7
	EB	23	8	2	23	9	R	23	4	MB	23	36	R1/B	23	34	NR/RSX	23	6	HS	23	37
24	E	49	31	1/S	49	32	T	49	3	M/ATB	49	35	T1/A	49	33	NT/TSX	49	5	PC/OS	49	7
	EB	24	8	2	24	9	R	24	4	MB	24	36	R1/B	24	34	NR/RSX	24	6	HS	24	37

Note 1: Connector wiring is the same for both "A" and "B" digroups.

Note 2: Pins 50 and 25 of each connector are spares.

*Not supplied on 628005.

TABLE F

628011 AND 628015 MULTIPLEX SHELF CONNECTOR WIRING

CHAN #	P25			P26			P27			P28			P29			P30†			P31		
	MDF	P25 J25 PIN #	CU PIN #	MDF	P26 J26 PIN #	CU PIN #	MDF	P27 J27 PIN #	CU PIN #	MDF	P28 J28 PIN #	CU PIN #	MDF	P29 J29 PIN #	CU PIN #	MDF	P30 J30 PIN #	CU PIN #	MDF	P31 J31 PIN #	CU PIN #
1	E	26	31	1/S	26	32	T	26	3	EB	26	8	T1/A	26	33	NT/TSX	26	5	PC/OS	26	7
	M/ATB	1	35	2	1	9	R	1	4	MB	1	36	R1/B	1	34	NR/RSX	1	6	HS	1	37
2	E	27	31	1/S	27	32	T	27	3	EB	27	8	T1/A	27	33	NT/TSX	27	5	PC/OS	27	7
	M/ATB	2	35	2	2	9	R	2	4	MB	2	36	R1/B	2	34	NR/RSX	2	6	HS	2	37
3	E	28	31	1/S	28	32	T	28	3	EB	28	8	T1/A	28	33	NT/TSX	28	5	PC/OS	28	7
	M/ATB	3	35	2	3	9	R	3	4	MB	3	36	R1/B	3	34	NR/RSX	3	6	HS	3	37
4	E	29	31	1/S	29	32	T	29	3	EB	29	8	T1/A	29	33	NT/TSX	29	5	PC/OS	29	7
	M/ATB	4	35	2	4	9	R	4	4	MB	4	36	R1/B	4	34	NR/RSX	4	6	HS	4	37
5	E	30	31	1/S	30	32	T	30	3	EB	30	8	T1/A	30	33	NT/TSX	30	5	PC/OS	30	7
	M/ATB	5	35	2	5	9	R	5	4	MB	5	36	R1/B	5	34	NR/RSX	5	6	HS	5	37
6	E	31	31	1/S	31	32	T	31	3	EB	31	8	T1/A	31	33	NT/TSX	31	5	PC/OS	31	7
	M/ATB	6	35	2	6	9	R	6	4	MB	6	36	R1/B	6	34	NR/RSX	6	6	HS	6	37
7	E	32	31	1/S	32	32	T	32	3	EB	32	8	T1/A	32	33	NT/TSX	32	5	PC/OS	32	7
	M/ATB	7	35	2	7	9	R	7	4	MB	7	36	R1/B	7	34	NR/RSX	7	6	HS	7	37
8	E	33	31	1/S	33	32	T	33	3	EB	33	8	T1/A	33	33	NT/TSX	33	5	PC/OS	33	7
	M/ATB	8	35	2	8	9	R	8	4	MB	8	36	R1/B	8	34	NR/RSX	8	6	HS	8	37
9	E	34	31	1/S	34	32	T	34	3	EB	34	8	T1/A	34	33	NT/TSX	34	5	PC/OS	34	7
	M/ATB	9	35	2	9	9	R	9	4	MB	9	36	R1/B	9	34	NR/RSX	9	6	HS	9	37
10	E	35	31	1/S	35	32	T	35	3	EB	35	8	T1/A	35	33	NT/TSX	35	5	PC/OS	35	7
	M/ATB	10	35	2	10	9	R	10	4	MB	10	36	R1/B	10	34	NR/RSX	10	6	HS	10	37
11	E	36	31	1/S	36	32	T	36	3	EB	36	8	T1/A	36	33	NT/TSX	36	5	PC/OS	36	7
	M/ATB	11	35	2	11	9	R	11	4	MB	11	36	R1/B	11	34	NR/RSX	11	6	HS	11	37
12	E	37	31	1/S	37	32	T	37	3	EB	37	8	T1/A	37	33	NT/TSX	37	5	PC/OS	37	7
	M/ATB	12	35	2	12	9	R	12	4	MB	12	36	R1/B	12	34	NR/RSX	12	6	HS	12	37
13	E	38	31	1/S	38	32	T	38	3	EB	38	8	T1/A	38	33	NT/TSX	38	5	PC/OS	38	7
	M/ATB	13	35	2	13	9	R	13	4	MB	13	36	R1/B	13	34	NR/RSX	13	6	HS	13	37
14	E	39	31	1/S	39	32	T	39	3	EB	39	8	T1/A	39	33	NT/TSX	39	5	PC/OS	39	7
	M/ATB	14	35	2	14	9	R	14	4	MB	14	36	R1/B	14	34	NR/RSX	14	6	HS	14	37
15	E	40	31	1/S	40	32	T	40	3	EB	40	8	T1/A	40	33	NT/TSX	40	5	PC/OS	40	7
	M/ATB	15	35	2	15	9	R	15	4	MB	15	36	R1/B	15	34	NR/RSX	15	6	HS	15	37
16	E	41	31	1/S	41	32	T	41	3	EB	41	8	T1/A	41	33	NT/TSX	41	5	PC/OS	41	7
	M/ATB	16	35	2	16	9	R	16	4	MB	16	36	R1/B	16	34	NR/RSX	16	6	HS	16	37
17	E	42	31	1/S	42	32	T	42	3	EB	42	8	T1/A	42	33	NT/TSX	42	5	PC/OS	42	7
	M/ATB	17	35	2	17	9	R	17	4	MB	17	36	R1/B	17	34	NR/RSX	17	6	HS	17	37
18	E	43	31	1/S	43	32	T	43	3	EB	43	8	T1/A	43	33	NT/TSX	43	5	PC/OS	43	7
	M/ATB	18	35	2	18	9	R	18	4	MB	18	36	R1/B	18	34	NR/RSX	18	6	HS	18	37
19	E	44	31	1/S	44	32	T	44	3	EB	44	8	T1/A	44	33	NT/TSX	44	5	PC/OS	44	7
	M/ATB	19	35	2	19	9	R	19	4	MB	19	36	R1/B	19	34	NR/RSX	19	6	HS	19	37
20	E	45	31	1/S	45	32	T	45	3	EB	45	8	T1/A	45	33	NT/TSX	45	5	PC/OS	45	7
	M/ATB	20	35	2	20	9	R	20	4	MB	20	36	R1/B	20	34	NR/RSX	20	6	HS	20	37
21	E	46	31	1/S	46	32	T	46	3	EB	46	8	T1/A	46	33	NT/TSX	46	5	PC/OS	46	7
	M/ATB	21	35	2	21	9	R	21	4	MB	21	36	R1/B	21	34	NR/RSX	21	6	HS	21	37
22	E	47	31	1/S	47	32	T	47	3	EB	47	8	T1/A	47	33	NT/TSX	47	5	PC/OS	47	7
	M/ATB	22	35	2	22	9	R	22	4	MB	22	36	R1/B	22	34	NR/RSX	22	6	HS	22	37
23	E	48	31	1/S	48	32	T	48	3	EB	48	8	T1/A	48	33	NT/TSX	48	5	PC/OS	48	7
	M/ATB	23	35	2	23	9	R	23	4	MB	23	36	R1/B	23	34	NR/RSX	23	6	HS	23	37
24	E	49	31	1/S	49	32	T	49	3	EB	49	8	T1/A	49	33	NT/TSX	49	5	PC/OS	49	7
	M/ATB	24	35	2	24	9	R	24	4	MB	24	36	R1/B	24	34	NR/RSX	24	6	HS	24	37

Note 1: Connector wiring is the same for both "A" and "B" digroups.

Note 2: Pins 50 and 25 of each connector are spares.

†Not supplied on 628015.

CHART 4 (Cont)

STEP

PROCEDURE

- 33 Wire each of the cables to the proper office connection point.

NON-CONNECTORIZED WIRING

CAUTION: Use 26AWG bit on wire-wrap tool.

- 34 On the 628005 shelf, the NT, NR, PC/OS, and HS leads are not connectorized; also, on the 628015 shelf, the NT and NR leads are not connectorized. If these leads are to be used, they can be accessed at the following pins on each channel unit connector (Table G).

TABLE G

NON-CONNECTORIZED LEADS

LEAD	CHANNEL UNIT CONNECTOR PIN NO.
NT or TSX	5
NR or RSX	6
PC/OS	7
HS	35

CHART 5

PRETEST

APPARATUS:

Volt-ohm meter (VOM) (WE KS-14510, Triplet 630, or equivalent)

STEP

PROCEDURE

- 1 At the FADP or power board, verify that the following fuses are removed.
- (a) MPX TERM fuse supplying battery to shelf.
 - (b) TALK BATTERY fuse supplying talk battery to shelf.
 - (c) 20-Hz fuse supplying 20 Hz to bay.
 - (d) - 48-ABS fuse supplying - 48 ABS to bay.

CHART 5 (Cont)

STEP

PROCEDURE

- 2 Connect VOM between the following points on the shelf backplane to determine if any power inputs are shorted to ground (Fig. 1).

- (a) TB1-3 to TB1-1
- (b) TB1-5 to TB1-1
- (c) 20-Hz pin to GND pin for both A and B digroups.
- (d) -48-ABS pin to TB1-1 for both A and B digroups.

Requirement: VOM reads infinity in each case.

- 3 At the FADP or power board, reinstall fuses which were previously removed.

Requirement: Fuses do not open.

- 4 Connect VOM across TB1-3 and TB1-1.

Requirement: VOM reads between -44 and -56 Vdc.

- 5 Connect VOM across TB1-5 and TB1-1.

Requirement: VOM reads between -44 and -56 Vdc.

- 6 Connect VOM across 20-Hz pin and GND pin for both Digroup A and B.

Requirement: VOM reads between 85 and 135 Vrms for both digroups.

- 7 Connect VOM across -48-ABS pin and TB1-1.

Requirement: VOM reads between -44 and -56 Vdc.
